Amendments to the Claims:

This listing of Claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method for performance management in a cellular mobile packet data network having a plurality of mobile stations linked to a plurality of base stations through a plurality of radio channels, the base stations being linked to a radio access network, and the radio access network being linked to a support node in a packet core network comprising the steps of

capturing raw traffic traces over standardized interfaces of the operational cellular mobile data network;

building a traffic and session database by parsing through the traces in order to extract and correlate ~~all the information which is needed to the database~~ information about each and every user session and user transaction which happened during the measurement period;

defining a set of ~~appropriate~~ key performance indicators, KPI, to ~~(KPI), which can~~ be used to characterize the performance of cells in terms of measurable parameters representative of user perceived end-to-end quality of service parameters; and

calculating the ~~set of appropriate~~ defined key performance indicators, wherein the step of calculating the key performance indicators is carried out by selecting a subset of the user transactions from the session and traffic database and obtaining a quality of service measure of the selected individual transactions.

2. (Previously Presented) The method of claim 1, wherein the cellular mobile packet data network is a GPRS network.

3. (Previously Presented) The method of claim 2, wherein the step of capturing raw traffic traces over standardized interfaces of the operational cellular mobile data network relates to a Gb trace.

4.   (Original)   The method of claim 2, wherein the step of capturing raw traffic traces over standardized interfaces of the operational cellular mobile data network relates to an encrypted Gb and Gr trace.

5.   (Original)   The method of claim 2, wherein the step of capturing raw traffic traces over standardized interfaces of the operational cellular mobile data network relates to an encrypted Gb and a Gn trace.

6.   (Previously Presented)   The method of claim 2, wherein the step of capturing raw traffic traces over standardized interfaces of the operational cellular mobile data network relates to a Gb, a Gi and a Remote Authentication Dial-in User Service (RADIUS) trace.

7.   (Previously Presented)   The method of claim 2, wherein the step of capturing raw traffic traces over standardized interfaces of the operational cellular mobile data network relates to an encrypted Gb, Gi, RADIUS trace and a list of Mobile Station ISDN (MSISDN) and International Mobile Subscriber Identity (IMSI) numbers.

8.   (Original)   The method of claim 2, wherein the step of capturing raw traffic traces over standardized interfaces of the operational cellular mobile data network relates to an encrypted Gb, Gi, RADIUS trace and a fractional Gn trace.

9.   (Canceled)

10.   (Original)   The method of claim 1, wherein the step of defining a set of appropriate key performance indicators comprises a key performance indicator measuring MMS large message download/send rate in a specified cell.

11.   (Original)   The method of claim 1, wherein the step of defining a set of appropriate key performance indicators comprises a key performance indicator measuring WAP object download delay in a specified cell.

12.   (Previously Presented)   The method of claim 1, wherein the step of defining a set of appropriate key performance indicators comprises a key performance indicator measuring Web small object download time in a specified cell, where the size of a small object is 9-11 kbyte.

13.   (Original)   The method of claim 1, wherein the step of defining a set of appropriate key performance indicators comprises a key performance indicator measuring Web large object download rate in a specified cell, where the size of a large object is larger than 50 kbyte.

14.   (Original)   The method of claim 1, wherein the step of defining a set of appropriate key performance indicators comprises a key performance indicator measuring FTP download rate in a specified cell, where the size of the downloaded file is larger than 50 kbyte.

15.   (Previously Presented)   The method of claim 1, wherein the step of defining a set of appropriate key performance indicators comprises a key performance indicator measuring POP3, mail download time in a specified cell, where the size of the downloaded file is 9-11 kbyte.

16.   (Previously Presented)   The method of claim 1, wherein the step of defining a set of appropriate key performance indicators comprises a key performance indicator measuring POP3, mail download rate in a specified cell, where the size of a downloaded file is larger than 50 kbyte.

17.   (Original)   The method of claim 1, wherein the step of defining a set of appropriate key performance indicators comprises a key performance indicator measuring end-to-end achievable throughput in a specified cell.

18.   (Currently Amended)   The method of claim 17, wherein the calculation of key performance indicator measuring end-to-end achievable throughput in a specified cell comprises the steps of:

calculating total inbound traffic of the user, including other transactions, between the first data packet of the particular TCP connection and the acknowledgement of the last data packet of the particular TCP connection;

dividing the [[the]] total inbound traffic (byte count) by the time elapsed between the first and last inbound data packet.

19.   (Original)   The method of claim 1, wherein the step of defining a set of appropriate key performance indicators comprises a key performance indicator measuring the rate of TCP connections and stalled periods in a specified cell.

20.   (Original)   The method of claim 1, wherein the step of defining a set of appropriate key performance indicators comprises a key performance indicator measuring the user-perceived throughput history in a specified cell.

21.   (Canceled)

22.   (Original)   The method of claim 1, wherein the step of calculating the performance indicators is carried out by calculating the key performance indicator value by summing the given Quality of Service measure of the selected individual transactions.

23.   (Original)   The method of claim 1, wherein the step of calculating the performance indicators is carried out by calculating the key performance indicator value

by averaging the given Quality of Service measure of the selected individual transactions.

24.   (Previously Presented)   The method of claim 1, wherein the step of calculating the performance indicators contains the steps of

reading the next transaction record from the traffic and. session database;

checking whether this transaction is of the type, which the KPI is about;

checking whether the transaction happened in the cell specified for the KPI;

calculating the quantity defined by the KPI for the particular transaction;

adding the value to an aggregation counter, and increasing the counter calculating the number of eligible transactions for the KPI;

returning to the beginning until all the transactions are processed;

calculating the KPI value by dividing the value of the aggregation counter with count of the eligible transactions.

25.   (Original)   The method of claim 24, wherein the step of checking whether this transaction is of the type, which the KPI is about is carried out by using the flow type field of the transaction record.

26.   (Original)   The method of claim 24, wherein the step of checking whether the transaction happened in the cell specified for the KPI is carried out by using the Cell Id field of the transaction record.

27.   (Original)   The method of claim 24, wherein the step of calculating the quantity defined by the KPI for the particular transaction uses the information elements of duration, timestamp of the first data packet, timestamp of the last data packet, packet count and loss count fields of the transaction record.

28.   (Currently Amended)   A system for performance management in a cellular mobile packet data network having a plurality of mobile stations linked to a

plurality of base stations through a plurality of radio channels, the base stations being linked to a radio access network, and the radio access network being linked to a support node in a packet core network, the system including a monitor node residing on a computer coupled to the cellular mobile packet data network comprising:

means for capturing raw traffic traces over standardized interfaces of the operational cellular mobile data network;

means for building a traffic and session database by parsing through the traces in order to extract and correlate all the information which is needed to the database information about each and every user session and user transaction which has happened during the measurement period;

means for defining a set of appropriate key performance indicators, which can to be used to characterize the performance of cells in terms of measurable parameters representative of user perceived end-to-end quality of service parameters; and

means for calculating the above defined key performance indicators, wherein the means for calculating further comprises means for selecting a subset of the user transactions from the session and traffic database and for obtaining a quality of service measure of the selected individual transactions.

29.   (Original)   The system of claim 28, in which monitor node comprising a traffic and session database which correlates traffic and mobility information extracted from passively captured traces collected from standardized interfaces.

30.   (Currently Amended)   A computer program product embodied in a computer readable storage medium, for performance management in a cellular mobile packet data network including a monitor node, said computer program product comprising:

computer-readable program code for capturing raw traffic traces over standardized interfaces of the operational cellular mobile data network;

computer-readable program code for capturing building a traffic and session database by parsing through the traces in order to extract and correlate all the

~~information which is needed to the database~~ information about each and every user session and user transaction which happened during the measurement period;

computer-readable program code for defining a set of ~~appropriate~~ key performance indicators, ~~which can~~ to be used to characterize the performance of cells in terms of measurable parameters representative of user perceived end-to-end quality of service parameters; and

computer-readable program code for calculating the ~~above~~ defined key performance indicators, wherein the computer-readable program code for calculating the key performance indicators is carried out by selecting a subset of the user transactions from the session and traffic database and obtaining a quality of service measure of the selected individual transactions.

31.   (New) A method for performance management in a cellular mobile packet data network having a plurality of mobile stations linked to a plurality of base stations through a plurality of radio channels, the base stations being linked to a radio access network, and the radio access network being linked to a support node in a packet core network comprising the steps of

capturing raw traffic traces over standardized interfaces of the operational cellular mobile data network;

building a traffic and session database by parsing through the traces in order to extract and correlate all the information which is needed to the database, wherein the traffic and session database contains information about a plurality of user transactions which happened during a measurement period, wherein each user transaction is associated with a specific subscriber using captured session management signaling, and each user transaction is associated with a cell location using captured mobility management signaling;

defining a set of key performance indicators; and

calculating the set of key performance indicators using a subset of the information in the traffic and session database to monitor user perceived end-to-end performance on a cell level.